

WHAT IS CLAIMED IS:

1. An ink jet recording method for conveying a recording medium onto a platen disposed to face a recording head for executing  
5 recording by discharging recording liquid droplets, to perform recording, comprising the steps of:

providing a rib row including a plurality of ribs in a direction intersecting a conveying direction of the recording medium, the ribs being  
10 disposed to be different from one another, and disposing at least two rib rows on the platen along the conveying direction of the recording medium; and

completing predetermined one-line  
15 recording by performing recording except for recording data corresponding to a position of each rib at each of at least the two rib rows when a recording operation is performed on a leading end or a rear end of the recording medium in the  
20 conveying direction thereof.

2. An ink jet recording apparatus for performing recording by conveying a recording medium onto a platen disposed to face a recording  
25 head for executing recording by discharging recording liquid droplets, comprising:

at least two rib rows disposed on the

platen along a conveying direction of the recording medium, each rib row including a plurality of ribs in a direction intersecting the conveying direction of the recording medium, the  
5 ribs being disposed to be different from one another,

wherein predetermined one-line recording is completed by performing recording except for recording data corresponding to a position of each  
10 rib at each of at least the two rib rows when a recording operation is performed on a leading end or a rear end of the recording medium in the conveying direction thereof.

15 3. An ink jet recording method for conveying a recording medium between a recording head for executing recording by discharging recording liquid droplets and a platen disposed to face the recording head, to perform recording,  
20 comprising the steps of:

dividing a discharge nozzle row of the recording head into at least two portions of a first nozzle row on the downstream side of a conveying direction of the recording medium, and a  
25 second nozzle row on the upstream side of the conveying direction of the recording medium;

using, as the platen, a platen including

at least two rib rows disposed in the recording medium conveying direction, each rib row having a plurality of ribs arrayed in a direction intersecting the recording medium conveying direction, the two ribs rows being divided near positions opposite a dividing line for dividing the first and second nozzle rows, and each rib of one rib row with the dividing line set as a boundary being disposed in a position between adjacent ribs of the other rib row;

executing two stages at least once each when a recording operation is performed in a leading end or a rear end of the recording medium in the conveying direction; the first stage being for positioning the leading end or the rear end of the recording medium in the conveying direction within a range of the second nozzle row, and recording a recording data first region equivalent to a part of recording data of one line by the recording head, using the range of the second nozzle row, in which the recording medium is present at this time or the ranges of the first and second nozzle rows, the second stage being for positioning the leading end or the rear end of the recording medium in the conveying direction within a range of the first nozzle row, and recording a recording data second region equivalent to a

remaining part of the recording data of one line  
by the recording head, using the ranges of the  
first and second nozzle rows, in which the  
recording medium is present at this time, or the  
5 range of the first nozzle row; and

for the recording data first region, using  
recording data obtained by masking at least a  
position of each rib of the rib row on the  
upstream side of the recording medium conveying  
10 direction for the entire recording data of one  
line, and for the recording data second region,  
using recording data obtained by masking at least  
a position of each rib of the rib row on the  
downstream side of the recording medium conveying  
15 direction.

4. An ink jet recording apparatus for  
performing recording by conveying a recording  
medium between a recording head for executing  
20 recording by discharging recording liquid droplets  
and a platen disposed to face the recording head,  
comprising:

at least two or more rib rows disposed at  
least in a region of the platen opposite a  
25 discharge nozzle row of the recording head in a  
conveying direction of the recording medium, each  
rib row including a plurality of ribs in a

direction intersecting the conveying direction of the recording medium,

wherein arrangements of ribs of adjacent rib rows among the two or more rib rows are  
5 different from each other.

5. An ink jet recording apparatus according to claim 4, wherein absorbing means is provided between ribs of the rib row constituting  
10 the platen to absorb recording liquid.

6. An ink jet recording apparatus according to claim 4, wherein regarding the adjacent ribs rows of the platen, in a position  
15 equivalent to a rough center between adjacent ribs of one rib row, each rib of the other rib row is disposed.

7. An ink jet recording apparatus  
20 according to any one of claims 4 to 6, wherein one-line recording by the discharge nozzle row of the recording head is completed by dividing recording data according a position of each rib, and performing at least two or more recording  
25 operations accompanied by recording medium conveying in the midway when a recording operation is performed on the leading end or the rear end of

the recording medium in the conveying direction.

8. An ink jet recording medium according to claim 7, wherein when at least the two or more  
5 recording operations are executed being accompanied by the recording medium conveying, a conveying amount of the recording medium in the midway is set equal to/lower than half of a length of the discharge nozzle row of the recording head  
10 in the recording medium conveying direction.

9. An ink jet recording apparatus of a serial type for performing recording by passing a recording material between a recording head and a  
15 platen disposed to face the recording head, and scanning, in a reciprocating manner, the recording head in a direction roughly orthogonal to a recording medium conveying direction, comprising:

dividing data of a main scanning direction  
20 of the recording head into a plurality of data blocks; and

executing recording on the recording medium by dividing the plurality of data blocks for a plurality of main scanning operations of the  
25 recording head,

wherein a sum total of lengths of the plurality of data blocks in the main scanning

direction of the recording head is longer than a real recorded length of the recording medium in the main scanning direction of the recording head.

5           10. An ink jet recording apparatus according to claim 9, wherein a recording pixel and a mask pattern indicating an array of non-recording pixels are set in superposed region of the data blocks, and in a recording head main  
10 scanning direction superposed region of at least adjacent data blocks, means for allocating different mask patterns, and means for thinning recording data of each data block according to each mask pattern are provided.

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          11. An ink jet recording apparatus for performing recording by scanning a recording head to the same recording region by a plurality of times, and thinning recording data according to a  
20 mask pattern different for each scanning, comprising:

          dividing data of a main scanning direction of the recording head into a plurality of data blocks;

25           executing recording on the recording medium by dividing the plurality of data blocks for a plurality of main scanning operations of the

recording head;

means provided for allocating different mask patterns different between a superposed region of adjacent data blocks in the scanning direction of the recording head and a region except for the superposed region of the data blocks; and

means provided for thinning recording data for each region of each data block according to each mask pattern.

12. An ink jet recording apparatus according to any one of claims 9 to 11, wherein the recording head include a thermal energy generator for discharging ink.

13. An ink jet recording method for performing recording by passing a recording material between a recording head and a platen disposed to face the recording head, and scanning, in a reciprocating manner, the recording head in a direction roughly orthogonal to a recording medium conveying direction, comprising the steps of:

dividing data of a main scanning direction of the recording head into a plurality of data blocks; and

executing recording on the recording



medium by dividing the plurality of data blocks for a plurality of main scanning operations of the recording head,

5 wherein a sum total of lengths of the plurality of data blocks in the main scanning direction of the recording head is longer than a real recorded length of the recording medium in the main scanning direction of the recording head.

10 14. An ink jet recording method for performing recording by scanning a recording head to the same recording region by a plurality of times, and thinning recording data according to a mask pattern different for each scanning,  
15 comprising the steps of:

dividing data of a main scanning direction of the recording head into a plurality of data blocks;

executing recording on the recording  
20 medium by dividing the plurality of data blocks for a plurality of main scanning operations of the recording head;

allocating different mask patterns different between a superposed region of adjacent  
25 data blocks in the scanning direction of the recording head and a region except for the superposed region of the data blocks; and

thinning recording data for each region of  
each data block according to each mask pattern.